GEOGRAPHIC SCHOOL BULLETINS

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Willard Price

IN SOLEMN MOOD, THESE WELL-FED KOREAN CHILDREN SEEM UNDULY MATURE

An estimated 20,000 pupils attended Korea's schools before the Japanese conquest. Since then, a greater number of children received instruction, but only in what their masters wanted them to learn—the Japanese language and menial trades. Two million children still lacked grammar school education before the war. Korea's lone university was in Seoul (Bulletin No. 5).

GEOGRAPHIC SCHOOL BULLETIN

HOW TEACHERS MAY OBTAIN THE BULLETINS

The Geographic School Bulletins are published weekly throughout the school year (thirty issues) and will be mailed to teachers in the United States and its possessions for one year upon receipt of 25 cents (stamps or money order); in Canada, 50 cents. Originally entered as second-class matter January 27, 1922; re-entered as of April 27, 1943, Post Office, Washington, D. C., under Act of March 3, 1879. Copyright, 1946, by National Geographic Society, Washington 6, D. C. International copyright secured. All rights reserved. Quedan reservados todos los derechos.

Soviets and Swiss, Giant and Midget Nations, Reach Accord

ESTABLISHMENT of diplomatic relations between the Soviet Union and Switzerland spotlights the world's largest country and one of the smallest. The Soviet colossus would make 500 Switzerlands, and its population is about 45 times greater.

Another contrast is in the respective ages of the two countries' governments. The one-party communist government of the Soviet Union is one of the world's youngest, with only 28 birthdays behind it, while the Swiss political democracy had its beginning 655 years ago.

Perpetual Neutrality Guaranteed in 1815

In 1291, the three "forest cantons" of Uri, Schwyz, and Unterwalden, in the heart of Switzerland, came together to found a "perpetual league." Cutting loose from the feudal control of neighboring Hapsburg rulers, they fought many battles to preserve their freedom.

Gradually other territories were added and additional cantons formed. After the Congress of Vienna in 1814-15, the confederation numbered 22, of which three have been subdivided into half cantons, making 25 units in all.

At this important Vienna Congress, which reorganized the continent in the wake of the Napoleonic struggles, the European powers guaranteed perpetual neutrality to the little inland country. During World War II, Switzerland was one of the few nations of Europe able to maintain neutrality.

German is the predominant tongue in 19 cantons. But there are four official languages, including the Romanic dialect, Romansh. French is generally spoken in five cantons, and in one—Ticino, in the south—Italian prevails.

Cantons Granted Certain Powers to Federal Government

The present Swiss government, like that of the United States, is a confederation, with strong accent on the individual independence of the cantons. Like the individual states, the cantonal units of Switzerland have their own legislative, executive, and judicial institutions. Often these institutions differ widely. Several of the smaller cantons continue the old open-air assembly, where laws are made by a show of hands and administrators are selected directly.

The federal government enjoys only expressly granted powers. In such matters as war, treaties, communications, marriage, coining money, and army regulations, the central government supersedes that of the canton. Since the adoption of the constitutions of 1848 and 1874, the Swiss government has tended toward more federal control.

Again, along United States lines, Switzerland has a president, a supreme court, and two federal legislative houses comparable to a senate and a house of representatives. Responsibilities and powers, however, differ from those in the American republic.

In joint session, the two legislative bodies of Switzerland elect, for a term of four years, the seven members of the federal council, which holds the chief directive and executive authority. They also select from these members the confederation's president and vice president. The president, chairman of the federal council, serves only one year; usually the vice president succeeds him. All council members are responsible to the legislature.

Switzerland is half as big as Maine, but its population is five times greater

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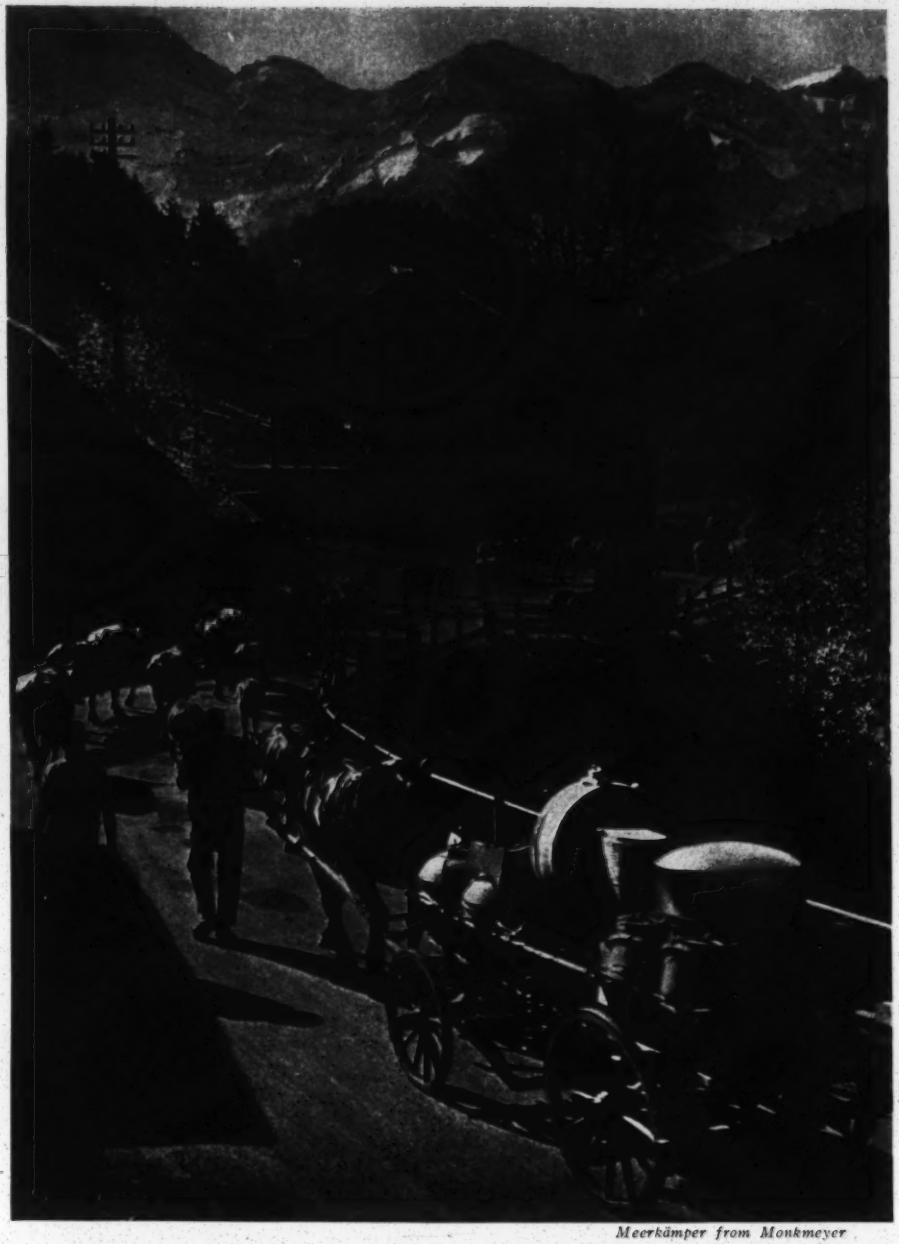

Meerkämper from Monkmeyer

APPENZELL HERDS TAKE THE TRAIL TO A SUMMER HOME IN THE MOUNTAINS

Not market day, not a parade, is this procession winding up a Swiss road toward snow-frosted mountains, but a sign that summer is coming to Appenzell. With the arrival of spring in this northeast Swiss canton (noted for embroidery as well as dairy products), herdsmen drive the cattle to pastures on the Säntis slopes. Dairy utensils accompany them so that cheese may be made "on location." At the Hotel Rossfall the annual herdsmen's ball is held. From a gable flies the Swiss flag, familiar, in reverse, as the symbol of the Red Cross. It was adopted as a tribute to the country of the organization's origin (Bulletin No. 1).

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Penang, Glamorous Malayan Island, Resumes Tin Smelting

TIN SMELTING, one of prewar Malaya's leading industries, has been resumed on Penang Island, off southeast Asia. A reported 10,000 tons of the precious ore is being prepared every day. More than four years have passed since the Japanese seizure of Malaya cut off the tin exports so badly needed by industrial nations.

Although Penang is properly the name only of the island, it is just as often applied to the island's main city—George Town (illustration, next page). In Malay, Penang means "betel-nut." The natives call the city Tanjong, meaning "a point." These names reveal the cosmopolitan character of the island. A mixing of races made Penang, like Singapore, a rich and populous world port before the war.

Island Lured Travelers from Round-the-World Steamers

Penang as a port is second only to Singapore in Malaya. It occupies a position at the northern end of the British-controlled area comparable to that of the more important island-city at the southern end. Both islands are just off the peninsula coast, and both guard approaches to the Strait of Malacca—important alike in war and peace. Three hundred and sixty-five straight-line miles separate Penang and Singapore.

World travelers have sought out this glamorous spot for half a century, regarding it in a class with Tahiti, Martinique, and Bali as a tropic isle not to be missed. Many round-the-world junketers left their steamers at Penang and took the railroad down the peninsula to Singapore, there to board again.

The island is especially beautiful in the northern part, where a range of mountains 2,500 feet high rises from the sea. A ridge of hills cuts through the central area. The rest of Penang's 110 square miles is fairly level, and largely forested.

George Town, with a majority of the 247,000 prewar islanders, lies at the foot of the mountains, on the northeast corner, the point nearest the mainland a mile and a half away. It has a magnificent railway station, but no railroad. Passengers ferry to the railhead at Prai on the mainland.

The Chinese Market a World Apart

More than half the islanders are Chinese. In normal times the city's harbor teems with strange Chinese junks, steamers, and sampans. Malay boats invariably have eyes painted on their bows so the craft can "see where they are going." Large European steamers tie up along the main street, as in Bermuda. Passengers going ashore have a choice of opulent hotels, clubs, and shops to patronize.

The Chinese market was like a different world. Peddlers carried portable restaurants on their backs; if they got an order they set up their paraphernalia, prepared the meal, and served it on the spot. Itinerant barbers wandered through the throng likewise serving customers wherever they appeared. They not only shaved their clients' faces, but also cleaned their ears and scraped their tongues.

In the Chinese theater attendants moved about wiping the perspiring faces of spectators—all with the same towel.

Sometimes called Prince of Wales Island, Penang was the first British possession in the Malay Peninsula; it was acquired by the East India Company in 1786. It still constitutes one of the few territories actually owned by the British in this area. Most of so-called British Malaya is merely under the protection of

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than the "down east" state. In the comparatively low plateau along the Rhine River on the German border, two-thirds of the Swiss live in one-third of their territory.

Normally, Switzerland's mountainous terrain (illustration, inside cover) accounts for the country's two most valuable natural resources—scenery and water power. As a result of the easily accessible power, the Swiss people have built up one of the world's busiest, most compact, industrial empires. About half of the entire population is engaged in industrial activities, producing such well-known articles as Swiss watches, toys, chocolate, cheese, textiles, and embroideries. The tourist trade in prewar days supported about eight Swiss out of every hundred.

Note: Switzerland is shown on the National Geographic Society's Map of Europe and the Near East. A price list of maps may be obtained from the Society's headquarters, Washington 6, D. C.

For additional information, see "Swiss Cherish Their Ancient Liberties," in the *National Geographic Magazine* for April, 1941*; and "August First in Gruyères," August, 1936*. (*Issues marked with an asterisk are available to teachers in packets of ten for $1.00.*)

See also, in the GEOGRAPHIC SCHOOL BULLETINS, "Switzerland, Five Years Surrounded by War, Carries On," March 5, 1945.

Bulletin No. 1, April 29, 1946

B. Fransioli from Black Star

"LAKE LEMAN LIES BY CHILLON'S WALLS: A THOUSAND FEET IN DEPTH BELOW, ITS MASSY WATERS MEET AND FLOW"

The English poet, Lord Byron, in immortalizing the Castle of Chillon and the four-year imprisonment of François Bonivard, used the French name for Switzerland's Lake Geneva. Through the mountain cleft behind the steeple (right) the Rhône River flows into the lake.

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Stilwell Road and Pipeline Abandoned; Linked India, China

THE Stilwell Road and the pipeline that closely follows it from India to China have been released from active duty. Unlike many a Yank stationed in the China-Burma-India theater, these military installations garnered enough points for discharge in only six and one-half months of wartime service.

Only slightly more than a year ago were United States Army Engineers in northern Burma rushing to completion these lifelines vital to a sustained United Nations offensive against the Japanese in China. Hailed as a miracle of construction, the Burmese portion of the Stilwell Road carried its first convoy in late January, 1945. Eleven military airports and a 1,600-mile, four-inch pipeline complete with pumping stations were component parts of the project.

Abandonment Saves Upkeep and Releases Troops

The purpose of these installations was to increase the flow of war materials from ports on India's Bay of Bengal to military and civilian supply bases deep in Yunnan Province, China. Their cost was approximately $200,000,000 of American money. The war's sudden end prevented them from completely returning the investment.

Today, their job completed, the military projects lie officially abandoned by Uncle Sam. Their high upkeep will be saved and several thousand troops may be released from duty there. No other government wants the road or pipeline. Salvage contracts for pipe and other materials will bring less than one per cent of their cost.

Why are they not worth maintaining? Ask any GI who wears a CBI ribbon, or any short-snorter who has flown the hazardous Hump route. The answer lies in the extreme ruggedness of the region's thickly forested mountains and the supersaturated wetness of its tropical summer monsoon. The facts inspire new respect for the magnitude of the Army Engineers' achievements. Only war could require transportation routes in such a region; peace has no need for them.

Known as the Ledo Road when its construction was started late in 1942, the now-abandoned highway had its western terminus at Ledo, Assam Province, northeastern India, head of a railroad line from Calcutta.

Crossing the Patkai Range into northern Burma's wild Hukawng Valley, it pushed southward to Warazup and Mogaung, eastward across the Irrawaddy River at Myitkyina, southward to Bhamo, eastward to Wanting, on the border of Yunnan Province, China. There it joined the original Burma Road, completing a western route to Kunming independent of Japanese-held central Burma. The combined route was renamed by Generalissimo Chiang Kai-shek in honor of American General "Vinegar Joe" Stilwell.

Chinese, Burmese Tribesmen, and Indians Helped

The Burmese portion of the road, like the older Chinese section, was carved out of earth, contoured along steep mountainsides where no rock was available for a roadbed, and where bulldozers or hand labor had to be kept ever ready to cut new sections after landslides. Crossing numerous mountain streams, it required 700 bridges (illustration, next page), each engineered in the field to withstand the terrors of the monsoon downpours and the flash rains which break without warning in the dry season.

Chinese, Burmese tribesmen, and Indian natives joined Americans in battling

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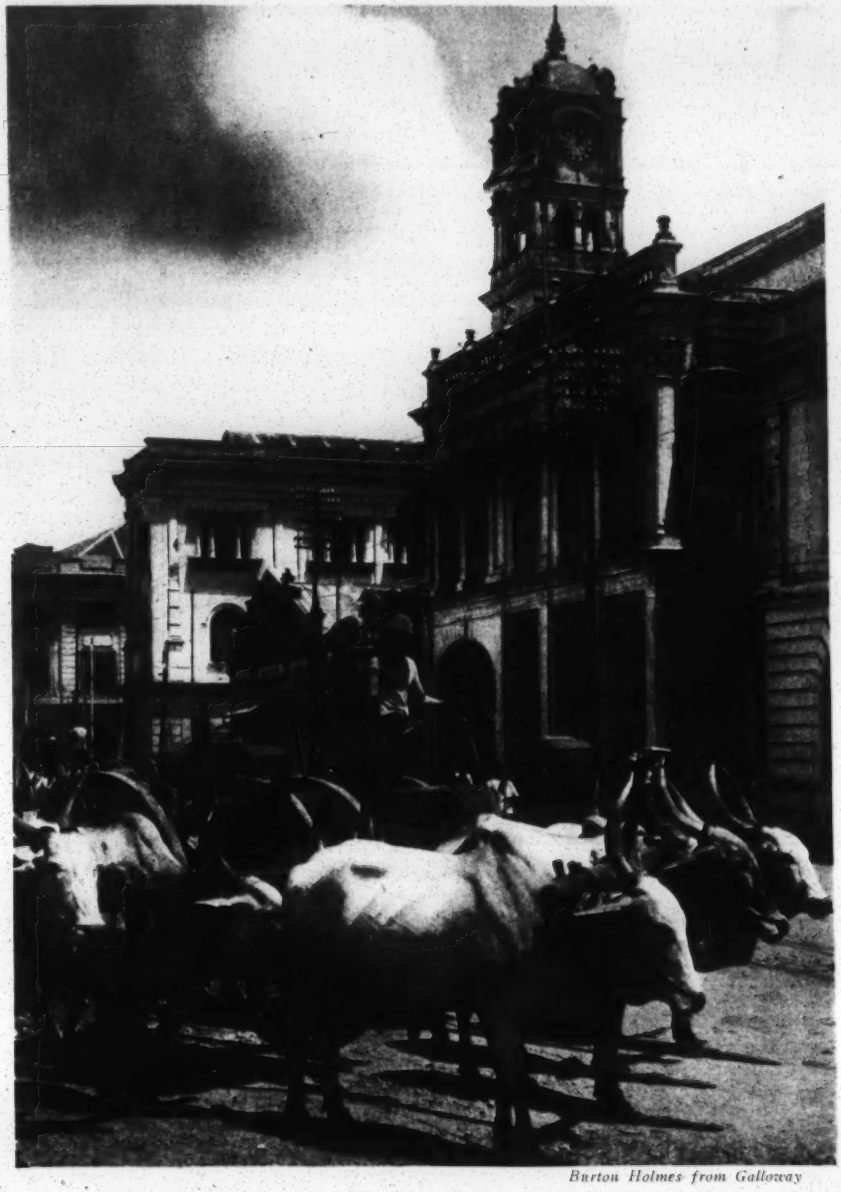
Britain, but Penang, Singapore, Province Wellesley, Malacca, and a few widely scattered islands comprise the Straits Settlements, an outright British possession.

Note: Penang may be located on the Society's Map of Southeast Asia.
See also "Tin, the Cinderella Metal," in the *National Geographic Magazine* for November, 1940*; and "Singapore, Crossroads of the East," March, 1926.

Bulletin No. 2, April 29, 1946



Burton Holmes from Galloway

SLEEPY BULLOCKS AND CREAKING CARTS CREATE A TRAFFIC JAM IN FRONT OF MODERN BUILDINGS IN GEORGE TOWN, PENANG ISLAND

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Undersea Earthquake Belts Explain Recurrent "Tidal Waves"

THE Alaskan center of the recent submarine earthquake, which caused towering waves to crash on Pacific shores from the Aleutians to Chile and from California to Hawaii, is on the northernmost rim of the earth's main belt of quakes. The frequency of disturbances along this belt periodically shakes man's faith in *terra firma*.

The earthquake zone, well defined after several decades of charting the earth's daily seismic disturbances, goes over land and under water nearly around the world. It follows the Pacific coast northward from Cape Horn along the western edge of the American continents, runs westward along the Aleutian Islands chain, and southwestward through Japan, where it is almost constantly active and often destructive.

New Island "Urania" Is Result of Earthquake Belt

From Japan it follows the Chinese coast and the Philippines to the Netherlands Indies, where it arcs southeastward through New Guinea and the Solomons to New Zealand, barely touching Australia.

An arm of this main earthquake belt branches southward from the Tokyo region to Guam. It includes Iwo Jima, the Marianas chain, and "Urania," the new volcanic island which has been growing in recent weeks near Bayonnaise Rocks. Urania Island was named by the British Admiralty for H. M. S. Urania, the destroyer which discovered it.

A second belt of frequent seismic activity branches from the Netherlands Indies, runs northwestward through Burma, then along the Himalayas, through northwest India, along the Persian Gulf, and northwestward to the Black Sea and the Mediterranean. Last year's quakes and sea waves rocking Bombay and neighboring Indian regions were similar to the recent Pacific tragedy. The earthquakes generated a destructive wave in the northern Arabian Sea which rolled landward and struck coastal villages.

A third belt, of comparatively little activity, runs under the middle of the Atlantic Ocean. These belts are regions of the earth's high mountains, under the sea as well as above it. Since nearly three-fourths of the globe is covered by oceans—to an average depth of two miles—undersea quakes are common.

The ocean surface rises or falls in a mass with its quaking floor, so that ship passengers far out at sea rarely notice even severe undersea quakes unless they are directly above them. In that case the few quivers they feel may suggest that the ship has scraped bottom, even though the ocean be a mile or more deep. The raised or lowered water mass does not cause a "tidal wave" until it approaches shallow water where the shelving sea bottom gradually builds up terrific wave action.

Coastal Residents of Peru and Chile Take to Hills During Tremors

Port Royal, Jamaica, was destroyed by the quake of 1692 and near-by Kingston was wrecked in 1907—graphic examples of earthquakes at sea level (illustration, next page). In 1929 a drop in the ocean floor off Newfoundland caused 12 transatlantic cables to pull apart. Ships in the area felt only slight trembles, but waves piled up to 50-foot heights in crashing the Newfoundland shore.

Waves caused by undersea quakes have frequently ravaged coasts of the eastern Mediterranean. But they are perhaps most frequent in the region of the

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steaming, tangled jungles and swamps. All worked in day and night shifts to get the job done. Convoys used every mile of the road as completed, bringing up supplies for fighting forces as well as for construction gangs.

The abandoned pipeline pumped aviation gasoline from Calcutta's docks to B-29 bases near Kunming. Pipe and equipment were delivered to improvised jungle landing fields by cargo planes. Indian battalions cleared the path through the undergrowth. One foot out of every 250 crossed rivers or gullies.

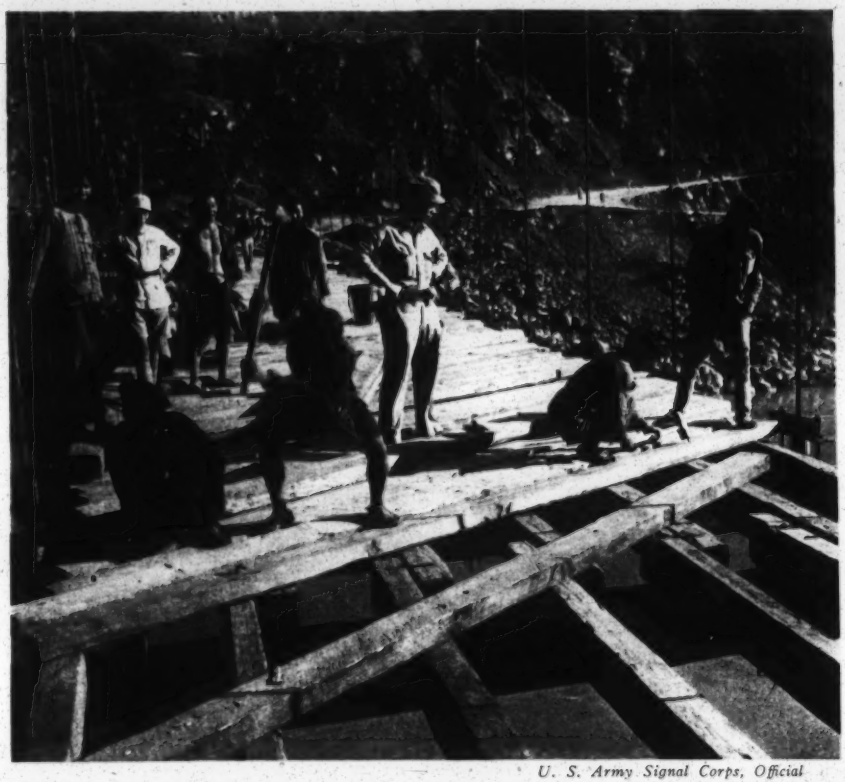
Before the Stilwell Road and the pipeline were opened, every ounce of gasoline, equipment, and supplies for the campaign in China had to be flown up to the thin-air level of 15,000 feet or higher in order to cross the Hump. This method was costly—cargo planes carrying four tons of gasoline consumed three and delivered one in the round trip from their bases in India to Yunnan.

Most of the salvage value in these CBI projects is in the pipeline, already sold for scrap. Salvaging of bridge metal is judged not worth the trouble of difficult dismantling operations. Maintenance of the obsolete road would require 12,600 troops and almost as many native laborers.

Note: The Stilwell Road appears on the Society's Map of China, and Map of India and Burma.

See also "Winning the War of Supply," in the *National Geographic Magazine* for December, 1945; "Stilwell Road—Land Route to China," June, 1945; "Burma: Where India and China Meet," October, 1943*; and "China Opens Her Wild West," September, 1942*.

Bulletin No. 3, April 29, 1946



U. S. Army Signal Corps, Official

ACROSS THE SALWEEN RIVER CHINESE WORKMEN THROW A SUSPENSION BRIDGE

Near the Burma border in mountainous western Yunnan Province, the Stilwell Road crossed this broad river trench and, in a few miles, that of the Mekong. The Chinese may maintain parts or all of their section of the wartime artery, now officially abandoned by Uncle Sam.

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Geo-Graphic Brevities:

HELGOLAND, GERMAN NORTH SEA BASE, SEEKS TO REJOIN BRITISH EMPIRE

THE tiny German island of Helgoland in the North Sea has asked to return to the British Empire. In 1921, after World War I, it made a similar appeal to the League of Nations, asking to be maintained as neutral territory under League protection or returned to Great Britain. The recent appeal, as reported from Copenhagen, asks reunion with Denmark as an alternative.

Both petitions reveal the difficulties, arising from the strategic position of their home, for 1,800 peace-loving Frisians of Anglo-Saxon descent.

Farthest seaward of the East Frisian Islands, Helgoland passed from Denmark to Great Britain in the Napoleonic wars. In 1890 Britain ceded it to Germany in exchange for Zanzibar, rich 1,000-square-mile island off Africa's east coast. Many Britons deplored loss of the Helgoland position, and the islanders themselves have not been too happy under German domination.

A flat-top plateau of red sandstone, Helgoland is shaped like a mile-long lamb chop. Its sheer walls rise nearly 200 feet from the North Sea, 28 miles from the northwest German coast. Judging by the rock ledges which surround it at sea level, the plateau was once five times its present 130 acres, and will continue to yield to the pounding of the waves.

Germany fortified Helgoland heavily before World War I, making it a Gibraltar against Allied approach to the ports of Bremen and Hamburg, and to the Kiel Canal. It was a threat to the British Navy from the outset of that war.

Dismantled by the terms of the Versailles Treaty, the Helgoland forts were reestablished by 1936. Shelters for submarines and torpedo boats were built on Helgoland and an airfield occupied near-by Dune, peacetime vacation spot for visitors from Germany. Helgoland was hit repeatedly by Allied bombs. A 1,000-plane raid less than a month before V-E Day was described as making the island look like "a stale cake crumbling under a knife."

Helgolanders are fishermen, boat pilots, and boardinghouse keepers. Their one town lies at the wide end of the island and is built in two parts. Most of the houses are on the high plateau, so huddled together for protection from the winds that many have no view of the sea. Others lie on the sand at the base of the cliff. A wooden stairway and an elevator join the two levels.

Note: Helgoland is shown on the Society's Map of Germany and Its Approaches.

* * * *

NEW GOVERNMENT PLANNED IN SEOUL, KOREA'S ANCIENT CAPITAL

SEOUL (Keijo to the Japanese), where on March 20 the United States-Soviet Commission for Korea convened to take up the task of establishing a democratic provisional government for the "Land of Morning Calm," has been capital of Korea since 1392. It is the center of Korea's educational (illustration, cover), scientific, and artistic development, which even 35 years of Japanese rule could not erase.

Today Seoul's public buildings, hotels, banks, broad avenues, streetcars (illustration, next page), and buses give it an appearance strangely modern in view of its five and a half centuries of history. During Japan's dominance, visitors were encouraged to believe this appearance symbolic of the "progress" the Japanese had brought to Korea. Japanese tourist booklets emphasized Japan's improvement of the city, but stressed the medieval charm.

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Peru-Chile junction of the South American coast, where ports are often battered and the start of earth tremors is a signal for residents to take to the hills. A strong ebb tide precedes each big wave, and the wave oscillations last for hours or even days.

In 1868, the heaviest recorded undersea quake of this region created a wave that lifted a United States vessel and deposited it gently on shore nearly half a mile inland.

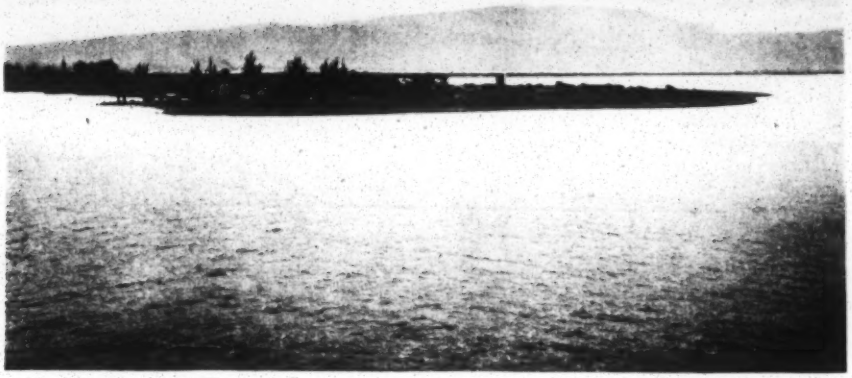
After the first shocks of the furious earth movements that shattered Lisbon, Portugal, in November, 1755, the waters of the Atlantic receded from the land, and then churned shoreward in a wave 60 feet high. Although this towering roller spent its major force on the doomed city, it was still strong enough to surge northward and overflow the market place at Kinsale, Eire, about 900 miles to the north.

Calling these quake-born ocean disturbances tidal waves is a common error; actually they have nothing to do with the tides. Probably the most destructive wave of historic times occurred in 1883 when Krakatau Volcano, on a small island 100 miles west of Batavia, Java, exploded and sank below the sea. A wave 50 feet high killed 36,000 coastal residents of near-by islands and, with diminishing force, traveled nearly halfway around the world.

Note: Regions where earthquake belts occur may be located on the Society's Map of the World.

See also "Charting a World at War," in the November, 1944, issue of the *National Geographic Magazine*.

Bulletin No. 4, April 29, 1946



Gilbert Grosvenor

AN EARTHQUAKE BROUGHT RETRIBUTION TO PORT ROYAL, JAMAICA, ONCE THE WORLD'S "WICKEDEST CITY"

Under Caribbean waters in the foreground lies the 17th-century pirate lair. In 1692 a convulsion of the earth made it a miniature Atlantis. The submerged buildings could be seen in the clear green depths 80 years after. As late as 1859 a diver reported that the roofs of houses on the sea bottom remained perfect. Port Royal, succeeded by near-by Kingston as Jamaica's main city, was described in its pirate days as "a gilded hades" where "Common seamen hung their ears with heavy rings. . . . Dagger thrusts were . . . common" and a murdered man remained on the floor "until the dancing was over."

Situated on the western side of the Korean peninsula, Seoul has a beautiful setting and a pleasant, moderate climate. Framed by black crags and jagged mountain peaks, it is about 60 river miles up the winding Kan from the Yellow Sea, but little more than 20 miles overland from the seaport of Jinsen (Chemulpo in Korean). Curving around its northern edge is a horseshoe-shaped ridge of granite hills—the Pook Han.

Traces of the 14th century wall still remain. Gaudily decorated palaces and pagodas, museums, markets, Buddhas, and an ancient bronze bell—said to be the third-largest in the world—are objectives for sightseeing Yanks of the occupation forces. At one time the bell sounded a curfew at nightfall, when all the men had to be off the streets to make way for the women. Men and women were not allowed on the street at the same time.

Peacetime industries in Seoul produced such typically Korean articles as dull-finish lacquer and mother-of-pearl-ornamented objects, and silk, paper, mats, and fans. The city's population was nearly a million in 1940.

Note: Korea appears on the Society's Map of Japan and Korea, which supplemented the *National Geographic Magazine* for December, 1945.

See also "Jap Rule in the Hermit Nation," in the October, 1945, issue of the *Magazine*; and "Chosen—Land of Morning Calm," October, 1933.

Frederick L. Hamilton from Three Lions

EASTERN AND WESTERN FASHIONS MEET IN SEOUL'S STREETS

In the crowd boarding an American-type streetcar—varied by left-hand entrance and an Oriental label—are long white gowns of traditional Korean design and—worn with bobby socks—a dark jumper dress, Oriental adaptation of a popular Occidental style. The men's costumes range from Western-style suits and Korean whites with baggy trousers to the civilian uniform of Japanese officials (foreground), pre-liberation, and designed for economy. Oriental characters run down the brick walls of a building which otherwise would not appear out of place in Omaha, Seattle, or Baltimore.

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